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# A STUDY ON DETERMINING THE EFFECTIVENESS OF THE ELECTRONIC INFORMATION SOURCES AND SERVICES BY THE USER'S OF UNIVERSITY LIBRARIES IN TAMIL NADU, INDIA

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# **A STUDY ON DETERMINING THE EFFECTIVENESS OF THE ELECTRONIC INFORMATION SOURCES AND SERVICES BY THE USER'S OF UNIVERSITY LIBRARIES IN TAMIL NADU, INDIA**

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## **Abstract**

*In the modern world, electronic resources have become very popular and libraries are no exception. Today the academic libraries are procuring more and more e-resources for their libraries. This paper is a review on the uses of e-resources by the users of university libraries in Tamil Nadu. The main objectives of the study are: to know the type of electronic resources accessed by the users, to study the awareness on E-resources by faculty and research scholars, and to identify the problems faced while accessing electronic information services. Both primary and secondary data were used for the study. Out of 1050 respondents selected from seven universities, only 870 returned the questionnaires fully completed.*

*The primary data collected were tabulated and analysed using simple statistical tools such as averages, percentages, standard deviations and SPSS. Hypotheses were set and tested using chi-square formula ( $O-E^2 / E$ ). For analysis and interpretation of the data collected, tables and diagrams are used wherever necessary. The outcome of the study has been reported through five chapters. Following the important findings of the study, certain suggestions have been made to be implemented by the selected university libraries in Tamil Nadu.*

**Keywords:** Data base, E-Resources, Electronic Library, Hypotheses, UGC INFONET and INFLIBNET.

## **Introduction**

The electronic publications in the past decades have increased dramatically to the extent that no one can propose equations to reflect this reality. The major individual electronic forms are internet, CD-ROMS, online information and magnetic tapes. Among various forms of electronic publications, probably the www is the most predominating one. The www is unorganized and unstructured distributed electronic information. An electronic environment allows changes and updating of original information provides views of the same document, integrates multimedia sources of information provides views of the same document, integrates multi-media sources of information, permits interchange of data and offers software support online. All these facilities make electronic transactions more useful for the reader.

## **Statement of the problem**

Every educational institution has realized the need for automation of their libraries. The UGC is also providing financial assistance for this purpose. Further, the UGC under its UGC-INFONET programme is providing access to e-journals to all the Indian university libraries for the benefits of the academic community. A review of the published literature in the selected area of study reveals that no systematic study has been carried out either on the availability of ICT infrastructure and the use by the users of university libraries in Tamil Nadu. Hence, the problem of the study is stated as “Information Search Pattern in Electronic Environment by Research Scholars at selected Universities in Tamil Nadu: A Study”.

## **Need and Significance of the Study**

There is an urgent need to know the information searching pattern of research scholars in electronic environment, their awareness about E-resources, strength and weakness of the collection of electronic information resources and services available in Tamil Nadu state university libraries. Research scholars and Faculty members entering research, appear to

have raised expectation about the capabilities of electron i.e. resources. Hence, this type of study is significant in the new era.

### **Objectives of the Study**

The following are the specific objectives of the study.

1. To identify the purpose and frequency of visit to the Library.
2. To know the types of electronic resources accessed by users.
3. To study the time spent on access of the electronic resources by the users.
4. To study the awareness on E-Resources by faculty and research scholars.
5. To determine the level of satisfaction of the users on E-Resources .
6. To study the importance of using E-Resources
7. To identify the problems while accessing electronic information services.

### **Hypothesis**

The following are some of the few hypotheses set and tested

1. There exists awareness on E- Resources among the respondents.
2. There exists level of satisfaction of the users on E-Resources
3. There exists an association between the age- wise respondents and their problems  
while accessing electronic information services.

### **Methodology of Research**

For the Present Study, survey method of research has been followed. The required data for study has been collected both from primary and secondary sources. First hand information was collected from the selected respondents and secondary date was collected from the records of the university libraries, required primary date was collected through the issue of a structured, close -ended questionnaire.

## **Sampling Technique**

For the present study, respondents have been selected on the basis of random sampling method from seven universities in Tamil Nadu. To be very specific three major disciplines such as Humanities social sciences and science are selected for study.

## **Tools used for Analysis**

The information collected has been tabulated under different titles. For analysis and interpretation of the data statistical tools such as averages, percentages and diagrammes have been used. In addition statistical package for social sciences (SPSS) have also been used. SPSS provides a statistical analysis and data management system in a graphical environment.

## **Limitation of the study**

Since the study is limited only to the seven selected Arts and Science State owned Government Universities and only among Arts and Science faculties the outcomes of the study are applicable only to the area and the institutions selected for study and it cannot be generalized.

## **Analysis and Interpretation:**

The analysis of the data collected has been made with reference to the objectives of the study and the hypotheses set and tested. Out of the 1050 questionnaires distributed only 870 questionnaires have been received fully answered. Hence, 870 have been taken as the total respondents for the study.

## **Purpose of visiting the library:**

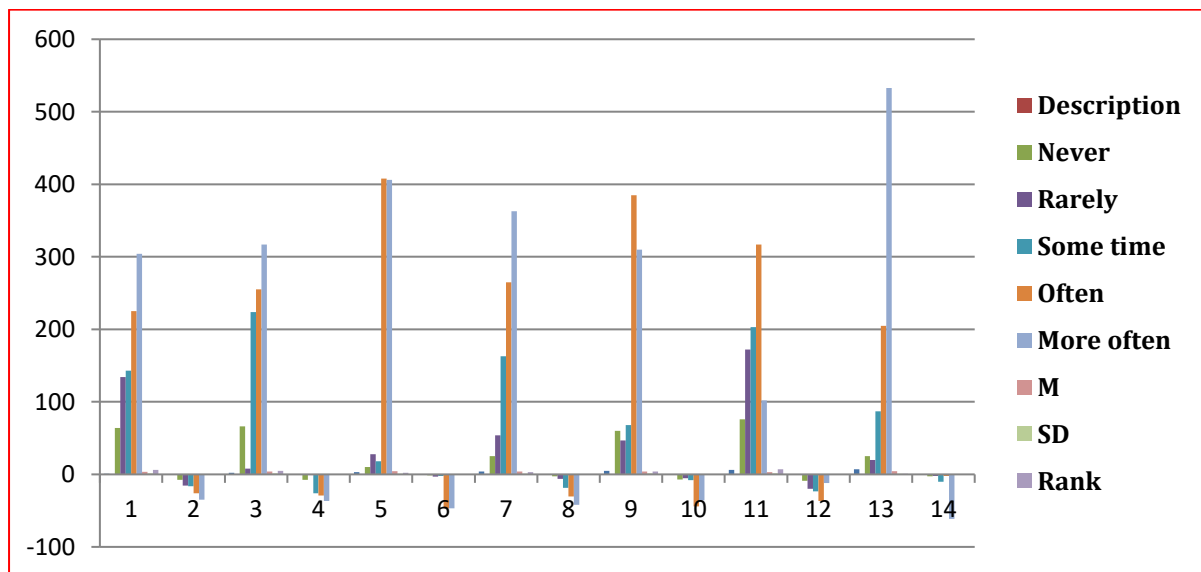
The purpose of visiting the library among the users in the university libraries has been analysed under five point scales as, “Never, Rarely, Sometimes, Often and More often. Mean,

Standard deviation and their rank for the purpose of visit have been calculated and shown in table1

**Table 1: The purpose of visiting library**

Sl.No	Description	Never	Rarely	Some time	Often	More often	M	SD	Rank
1	To Read News Papers & periodicals	64 (7.36)	134 (15.4)	143 (16.44)	225 (25.86)	304 (34.94)	3.66	1.295	6
2	To prepare for competitive Examinations	66 (7.59)	08 (0.92)	224 (25.86)	255 (29.31)	317 (36.44)	3.86	1.150	5
3	To get General knowledge & Employment News	10 (1.15)	28 (3.22)	18 (2.07)	408 (46.9)	406 (46.67)	4.35	0.774	2
4	Entertainment	25 (2.87)	54 (6.21)	163 (18.74)	265 (30.46)	363 (41.72)	4.02	1.055	3
5	To Borrow Books	60 (6.9)	47 (5.4)	68 (7.82)	385 (44.25)	310 (35.63)	3.96	1.128	4
6	For Academic improvement& Research purpose	76 (8.74)	172 (19.77)	203 (23.33)	317 (36.44)	102 (11.72)	3.23	1.154	7
7	E-Resources others	25 (2.87)	20 (2.3)	87 (10)	205 (2.35)	533 (61.26)	4.38	0.95	1

Source: Calculated from primary data



**Fig.1. The purpose of visiting library**

The table shows that the respondents have given first priority for the purpose of E-Resources and the second preference was given for acquiring General knowledge and employment news. The least preference was given for academic improvement and research purpose. The mean value of all variables range between 3.23 and 4.38. Hence, it can be inferred that all the seven variables lie between often and more often. The deviation of opinion ranges between 0.774 and 1.295.

### **Types of E-resources accessed in libraries**

The study has analysed the type of E-resources accessed by the users in university libraries. Five point scale such as Never, Rarely, Sometimes, Often and More Often are used for the analysis. The mean, Standard Deviation and their Rank for the types of E-resources accessed have been calculated and shown in table-2. It can be inferred from table.2 that the respondents have given first priority for the type of E-mail 'Search engines' and 'Websites' are the second and third preference was for the type of 'Bulletin board services. The mean value of all the variables range between 3.58 and 4.53. Hence, it can be inferred that all variables lie between 'Often and More often'. The deviation ranges between 0.88 and 1.097.

**Table 2: Types of E-resources accessed in Libraries**

Sl.No	Description	Never	Rarely	Some time	Often	More often	M	SD	Rank
1	Search Engines	10 (1.15)	41 (4.71)	71 (8.16)	345 (39.66)	403 (46.32)	4.25	0.88	2
2	Web sites	27 (3.1)	38 (4.37)	134 (15.4)	214 (24.6)	457 (52.53)	4.19	1.048	3
3	E-mail	24 (2.76)	30 (3.45)	59 (6.78)	101 (11.61)	656 (75.4)	4.53	0.961	1
4	E-journals-books	34 (3.91)	39 (4.48)	96 (11.03)	322 (37.01)	379 (43.56)	4.12	1.032	4
5	Data bases	46 (5.29)	36 (4.14)	155 (17.82)	327 (37.59)	306 (35.17)	3.93	1.081	6
6	Professional societies/Associations	31 (3.56)	63 (7.24)	74 (8.51)	320 (36.78)	382 (43.91)	4.1	1.061	5
7	List serve(discussion group)	24 (2.76)	95 (10.92)	172 (19.77)	355 (40.8)	224 (25.75)	3.76	1.041	7
8	Bulletin board services	39 (4.48)	98 (11.26)	257 (29.54)	274 (31.49)	202 (23.22)	3.58	1.097	8

Source: Primary data (figures in the parentheses denote percentages)

### Extent of satisfaction with electronic information services

The study has analyzed the extent of satisfaction with electronic information resources by the users in university libraries. Five point's scale such as Dissatisfied, No Comments, Somewhat satisfied, satisfied and highly satisfied was used to measure the level of satisfaction. The mean, Standard deviation and the Rank for the extent of satisfaction have been calculated and shown in table 3.

**Table 3: The level of satisfaction with electronic information services**

Sl. No	Description	Dissatisfied	No Comments	Some What satisfied	Satisfied	Highly satisfied	M	SD	Rank
1	Internet Sources	9 (1.03)	11 (1.26)	89 (10.23)	256 (29.43)	505 (58.05)	4.42	0.806	1
2	Subscribed data bases	48 (5.52)	161 (18.51)	43 (4.94)	280 (32.18)	338 (38.85)	3.80	1.280	6
3	E-Books	11 (1.26)	68 (7.82)	257 (29.54)	192 (22.07)	342 (39.31)	3.90	1.052	5
4	A/V materials	6 (0.69)	157 (18.05)	109 (12.53)	232 (26.67)	366 (42.07)	3.91	1.151	4
5	E-Journals	4 (0.46)	80 (9.2)	37 (4.25)	416 (47.82)	333 (38.28)	4.14	0.903	2
6	Ask a Librarian	148 (17.01)	130 (14.94)	145 (16.67)	229 (26.32)	218 (25.06)	3.27	1.422	7
7	CD-ROMS Databases	169 (19.43)	181 (20.8)	61 (7.01)	272 (31.26)	187 (21.49)	3.15	1.462	9
8	E-Catalogues	129 (14.83)	140 (16.09)	170 (19.54)	260 (29.89)	171 (19.66)	3.23	1.336	8
9	Open Sources Data Base	4 (0.46)	99 (11.38)	153 (17.59)	278 (31.95)	336 (38.62)	3.97	1.029	3

Source: Computed from primary data (figure in the parentheses denote percentages)

The Table 3 shows that the respondents have given first priority for the e-resources of 'internet sources' E-Journals and 'open source databases are the second and third preferences of the respondents. The least preference was given for the type of 'CD-ROM' Databases. The mean value of all the variables range between 3.15 and 4.42. Hence, it can be inferred that all the nine variables lie between satisfied and 'Highly satisfied'. The deviation of opinion ranges between 0.806 and 1.462



### Accessibility of UGC- E-Journals in Library:

The Accessibility of UGC journals in Library among the users in the university libraries have been analysed based on the opinion of the respondents is shown in table 4. The table reveals that the accessibility of UGC-E-journals in Library among the users in the university libraries with their category of gender.

**Table 4: Accessibility of UGC- E-Journals in Library**

Description	Gender		Age Category				Faculty Category				Student category
	Male	Female	UP to 30	31-35	36-40	Above 40	Science	Social science	Human ities	Research sources	Faculty
Yes	527 (50.19)	343 (32.67)	170 (16.19)	203 (19.33)	197 (18.76)	300 (28.58)	384 (36.58)	334 (31.50)	152 (14.48)	533 (50.76)	343 (32.67)
No	0	0	0	0		0	0	0	0	0	0

Sources: Calculated from primary data

Table 4 Shows that the accessibility of UGC-ess E-journals among the users in the university libraries. It is found that all respondents are more aware and also access the UGC, E-Journals in their respective libraries.

### Difficulties encountered in accessing E-Journals:

The difficulties encountered in accessing E-journals by the users in university libraries have been analysed using five point scale such as Never, Rarely, Sometimes, Often and More Often. The mean, Standard Deviation and their Rank for the difficulties encountered in accessing E-journals that have been calculated are shown in table 5.

**Table 5: Difficulties encountered in accessing E-journals**

Description	Never	Rarely	Some Times	Often	Most often	Mean	Std Deviation	Rank
Required password not known	24 (2.76)	21 (2.41)	147 (16.9)	370 (42.53)	308 (35.4)	4.05	0.931	4
Access is restricted to Campus only	23 (2.87)	20 (2.3)	78 (8.97)	440 (50.57)	307 (35.29)	4.13	0.881	2
The E-Journal interface is difficult to Navigate	38 (4.37)	33 (3.79)	72 (8.28)	326 (37.47)	401 (46.09)	4.17	1.030	1
The library did not pay subscription to Journals required	48 (5.52)	33 (3.79)	58 (6.67)	370 (42.53)	361 (41.49)	4.11	1.058	3

Sources: Prepared from primary data.(percentages given within brackets)

It is inferred from table 5 that the respondents have given first preference for the difficulties encountered in accessing E-journals. Access is restricted to campus only and the library did not subscribe to the required Journals are the second and third preferences of the respondents. The least preferences given for “required password not known”. The mean value of all the variables range between 4.05 & 4.17. Hence, it can be inferred that all the four variables lie on more often. The deviation of opinion ranges between 0.881 &1.058.

#### **The importance of using electronic resources:**

The computed data has been analysed to know the important of using electronic resources by the users in university libraries. Five points scale has been used to ascertain the importance of using electronic resources. The mean, standard deviation and their rank for the importance of using e-resources have been calculated and is shown in table 6.

**Table 6: Importance of using electronic resources**

Sl. No	Description	Not Important at all	Not important	Some What important	Important	Very important	Mean	SD	Rank
1	Research/Project	9 (1.03)	155 (17.82)	398 (45.75)	45 (5.17)	263 (30.23)	3.46	1.128	8
2	Lesson plans preparation	4 (0.46)	9 (1.03)	225 (25.86)	299 (34.37)	333 (38.28)	4.09	0.847	5
3	Accessing online databases	5 (0.57)	9 (1.03)	204 (23.45)	261 (30)	391 (44.64)	4.18	0.864	3
4	Publishing	3 (0.34)	124 (14.25)	141 (16.21)	181 (20.8)	421 (48.39)	4.03	1.117	6
5	Downloading programmes	5 (0.57)	29 (3.33)	84 (9.66)	118 (13.56)	634 (72.87)	4.55	0.843	1
6	Placements	10 (1.15)	22 (2.53)	140 (16.09)	101 (11.61)	597 (68.62)	4.44	0.927	2
7	Chatting	13 (1.49)	85 (9.79)	97 (11.15)	477 (54.83)	198 (22.76)	3.88	0.922	7
8	Entertainment	13 (1.49)	15 (1.72)	92 (10.57)	500 (57.47)	250 (28.74)	4.10	0.766	4

Sources: Prepared from primary data (Figures in the parentheses denote percentages)

Table 6 Shows that the respondents have given first priority for the importance of ‘down loading programmes’. Placements and accessing online databases are the second & third preferences of the respondents .The least preference was given for the type of research project. The mean value of all the variables ranges between 3.59 and 4.54.It can be inferred that all the 8 variables lie between important and very important. The deviation of opinion ranges between 0.763 &1.123

## **Findings of the study**

The following are some of the findings of the study

- The purpose of visiting the library is identified as the respondents have given first priority for the purpose of E-resources. General knowledge and Employment News and the second and third preference given by the respondents. The least preference was given for the purpose of Academic improvement and research purpose.
- The study has shown that the highest numbers were in the category of male 277(31.84%) and were average in the level of using the Electronic information resources.
- The analysis of the data has shown the types of E-resources accessed by the users in university libraries. The respondents have given priority for the type of E-mail, Search engines and Websites are second and third preference given by the respondents. The least preference was given for the type of “Bulletin board services”.
- With regard to the extent of satisfaction of electronic information resources, the respondents have given first priority for the e-resources of ‘Internet sources’. The least preference was given for CD-ROM Databases.
- The study has revealed that all respondents have more awareness on UGC- E-journals and also access UGC E-Journals in their respective libraries.
- The respondents have given first priority for the Difficulties encountered in access E-Journals as for the accessing E-Journal interface is difficult to navigate. The least preference was given for ‘Required Password Not Known’

## **Result of Hypotheses set and tested**

### **Hypothesis**

- There exists awareness on E-resources among the respondents. Majority of the respondents are more aware of e-resources and e-services in all the university libraries. Hence, the hypothesis is proved correct.
- There exists level of satisfaction of the users on E-resources. The respondents from all the universities are satisfied about e-resources from libraries. Hence the hypothesis is ‘Accepted’.

- There exists an association between the age wise respondents and their problems while accessing electronic information services. The respondents from all the universities want an improvement in e-resources and e-services in the libraries. Hence, the hypothesis is proved correct.

### **Suggestions**

- Since respondents from all universities felt the absence of latest collection of information, it is recommended that a collection of latest information must be made available in all universities for academic and research work.
- Since the electronic resources as well as the digital resources are more important for the academic and research activities, efforts should be made to develop and extend the access modes to the users.
- At present all are living in a digital and paperless society. Hence, there is a need to increase the web based services in library activities.
- The awareness and satisfaction of library e-resources and e-services facility are more satisfactory. But they have to be updated regularly by based on the need of user-community.
- All the universities should concentrate on resources as well as services like universities in western countries. So the authority of institutions should provide more priorities to develop infrastructural facilities in such libraries.

### **Conclusion**

At present library plays a vital role in the academic and research field in the higher educational institutions. The application of information and communication on technology in libraries has greatly influenced teaching and research community to access information resource and services. Information and communication technology needs high literacy skill

for faculty in the emerging knowledge driven society despite the high dissemination rate of ICT and exponential growth of internet.

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